

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-18. (Cancelled)

19. **(Currently Amended)** A receiver unit in a wireless communication system, comprising:

a signal detector operative to determine a metric for a data transmission hypothesized to have been received;

a threshold computation unit operative to determine a threshold ~~for~~ based on the hypothesized data transmission; and

a comparator operative to receive the metric and the threshold and provide an output indicating whether or not the data transmission is deemed to have been received.

20. (Original) The receiver unit of claim 19, wherein the threshold is determined based on received pilot symbols for the hypothesized data transmission.

21. (Original) The receiver unit of claim 20, wherein the threshold is further determined based on received data symbols for the hypothesized data transmission.

22. (Original) The receiver unit of claim 19, wherein the metric relates to signal energy of the hypothesized data transmission.

23. (Original) The receiver unit of claim 19, wherein the signal detector is operative to determine the metric based on a plurality of received signals for a plurality of antennas, and wherein the threshold computation unit is operative to determine the threshold based on the plurality of received signals.

24. (Original) A method of detecting data transmissions in a wireless multiple-access communication system, comprising:

first processing received data symbols for a data transmission hypothesized to have been received to provide remodulated symbols that are estimates of transmitted data symbols; and

second processing the received data symbols and the remodulated symbols to provide a detector output that indicates whether or not the data transmission is deemed to have been received.

25. (Original) The method of claim 24, wherein the first processing includes demodulating the received data symbols to provide recovered symbols, decoding the recovered symbols to provide decoded data, and re-encoding the decoded data to provide the remodulated symbols.

26. (Original) The method of claim 24, further comprising:  
determining a threshold to use for the hypothesized data transmission, and wherein the detector output is further determined based on the threshold.

27. (Original) The method of claim 26, wherein the second processing includes determining a metric based on the received data symbols and the remodulated symbols, and

comparing the metric against the threshold, and wherein the detector output is based on the comparing.

28. (Original) A method of detecting data transmissions in a wireless multiple-access communication system, comprising:

determining a metric for a data transmission hypothesized to have been received;  
determining a threshold for the hypothesized data transmission based on samples received for the hypothesized data transmission; and

comparing the metric against the threshold to provide an output indicating whether or not the data transmission is deemed to have been received.

29. (Original) An apparatus in a wireless multiple-access communication system, comprising:

means for processing received data symbols for a data transmission hypothesized to have been received to provide remodulated symbols that are estimates of transmitted data symbols; and

means for processing the received data symbols and the remodulated symbols to provide a detector output that indicates whether or not the data transmission is deemed to have been received.

30. (Original) The apparatus of claim 29, further comprising:  
means for demodulating the received data symbols to provide recovered symbols;  
means for decoding the recovered symbols to provide decoded data; and  
means for re-encoding the decoded data to provide the remodulated symbols.
31. (Original) An apparatus in a wireless multiple-access communication system, comprising:  
means for determining a metric for a data transmission hypothesized to have been received;  
means for determining a threshold for the hypothesized data transmission based on samples received for the hypothesized data transmission; and  
means for comparing the metric against the threshold to provide an output indicating whether or not the data transmission is deemed to have been received.
32. (New) A computer-readable medium storing instructions thereon for performing a method of detecting data transmissions in a wireless multiple-access communication system, the method comprising:  
determining a metric for a data transmission hypothesized to have been received;  
determining a threshold for the hypothesized data transmission based on samples received for the hypothesized data transmission; and  
comparing the metric against the threshold to provide an output indicating whether or not the data transmission is deemed to have been received.
33. (New) The computer-readable medium of claim 32, wherein the threshold is determined based on received pilot symbols for the hypothesized data transmission.
34. (New) The computer-readable medium of claim 33, wherein the threshold is further determined based on received data symbols for the hypothesized data transmission.
35. (New) The computer-readable medium of claim 32, wherein the metric relates to signal energy of the hypothesized data transmission.
36. (New) The computer-readable medium of claim 32, the method further comprising determining the metric based on a plurality of received signals for a plurality of antennas, and determining the threshold based on the plurality of received signals.

37. (New) A computer-readable medium storing instructions thereon for performing a method of detecting data transmissions in a wireless multiple-access communication system, comprising:

first processing received data symbols for a data transmission hypothesized to have been received to provide remodulated symbols that are estimates of transmitted data symbols; and

second processing the received data symbols and the remodulated symbols to provide a detector output that indicates whether or not the data transmission is deemed to have been received.

38. (New) The computer-readable medium of claim 37, wherein the first processing includes

demodulating the received data symbols to provide recovered symbols,

decoding the recovered symbols to provide decoded data, and

re-encoding the decoded data to provide the remodulated symbols.

39. (New) The computer-readable medium of claim 37, the method further comprising:

determining a threshold to use for the hypothesized data transmission, and wherein the detector output is further determined based on the threshold.

40. (New) The computer-readable medium of claim 39, wherein the second processing includes

determining a metric based on the received data symbols and the remodulated symbols, and

comparing the metric against the threshold, and wherein the detector output is based on the comparing.

41. (New) A processor capable of executing instructions for performing a method of detecting data transmissions in a wireless multiple-access communication system, the method comprising:

determining a metric for a data transmission hypothesized to have been received;

determining a threshold for the hypothesized data transmission based on samples received for the hypothesized data transmission; and

comparing the metric against the threshold to provide an output indicating whether or not the data transmission is deemed to have been received.

42. (New) The processor of claim 41, wherein the threshold is determined based on received pilot symbols for the hypothesized data transmission.

43. (New) The processor of claim 42, wherein the threshold is further determined based on received data symbols for the hypothesized data transmission.

44. (New) The processor of claim 41, wherein the metric relates to signal energy of the hypothesized data transmission.

45. (New) The processor of claim 41, the method further comprising determining the metric based on a plurality of received signals for a plurality of antennas, and determining the threshold based on the plurality of received signals.

46. (New) A processor capable of executing instructions for performing a method of detecting data transmissions in a wireless multiple-access communication system, the method comprising:

first processing received data symbols for a data transmission hypothesized to have been received to provide remodulated symbols that are estimates of transmitted data symbols; and

second processing the received data symbols and the remodulated symbols to provide a detector output that indicates whether or not the data transmission is deemed to have been received.

47. (New) The processor of claim 46, wherein the first processing includes demodulating the received data symbols to provide recovered symbols, decoding the recovered symbols to provide decoded data, and re-encoding the decoded data to provide the remodulated symbols.

48. (New) The processor of claim 46, the method further comprising: determining a threshold to use for the hypothesized data transmission, and wherein the detector output is further determined based on the threshold.

49. (New) The processor of claim 48, wherein the second processing includes determining a metric based on the received data symbols and the remodulated symbols, and

comparing the metric against the threshold, and wherein the detector output is based on the comparing.

50. (New) An apparatus in a wireless multiple-access communication system, comprising:

a first processor processing received data symbols for a data transmission hypothesized to have been received to provide remodulated symbols that are estimates of transmitted data symbols; and

a second processor processing the received data symbols and the remodulated symbols to provide a detector output that indicates whether or not the data transmission is deemed to have been received.

51. (New) The apparatus of claim 50, further comprising:

a demodulator demodulating the received data symbols to provide recovered symbols;

a decoder decoding the recovered symbols to provide decoded data; and

an encoder re-encoding the decoded data to provide the remodulated symbols.

52. (New) The method of claim 28, wherein the threshold is determined based on received pilot symbols for the hypothesized data transmission.

53. (New) The method of claim 52, wherein the threshold is further determined based on received data symbols for the hypothesized data transmission.

54. (New) The method of claim 28, wherein the metric relates to signal energy of the hypothesized data transmission.

55. (New) The method of claim 28, further comprising determining the metric based on a plurality of received signals for a plurality of antennas, and determining the threshold based on the plurality of received signals.